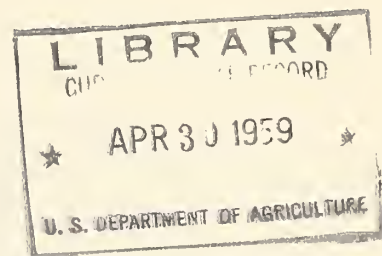


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HARVESTING the 1956 CORN CROP



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CONTENTS

	Page
SUMMARY-----	3
THE BACKGROUND-----	4
ACREAGE AND PRODUCTION TRENDS-----	4
UTILIZATION OF THE CORN CROP-----	5
CORN FOR GRAIN-----	5
Mechanical Harvesting-----	5
Hand Harvesting-----	7
Drying Corn-----	8
CORN FOR SILAGE-----	8
HOGGING, GRAZING, AND FORAGE-----	9

HARVESTING THE 1956 CORN CROP

by

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SUMMARY

The total acreage of corn harvested in 1956 amounted to 75.6 million acres, of which 86 percent was for grain, 9 percent for silage, 4 percent for hogging and grazing, and about 1 percent for feeding without removing the ears. In 1956, the acreage was relatively small, but yields were so good that the 54.3 million tons of silage attained a new production record and the 3,090-million-bushel crop of grain was the largest since the record crop of 1948.

In 1938, 12 percent and in 1956, 78 percent of the acreage of corn for grain was picked with mechanical pickers.

Field shelling of corn for grain shows indications of becoming important, but in 1956, it accounted for less than 3 percent of the acreage. Nor was drying of corn on the farm done extensively. About 2 percent of the production was dried with heated air, and 1 percent was dried with forced unheated air.

More extensive use of machinery is evident in the harvesting of corn for silage. Between 1948 and 1956, the quantity of corn silage harvested with field forage harvesters increased from about one-third to almost 90 percent of the total production.

The acreage of corn used for hogging down, grazing, and forage was larger than average in the drought areas. Some of the corn harvested for forage was small enough to cut with a mower; a side-delivery rake was used for raking.

THE BACKGROUND

This report contains information on methods of harvesting the 1956 corn crop and trends in the different harvesting methods. The basis for the 1956 estimates was information supplied by the voluntary crop reporters of the United States Department of Agriculture in February 1957. A mailed questionnaire was used and about 29,400 usable reports were returned.

The acreage and production of corn grown for grain were reported. The acreage was broken down to show the number of acres harvested with mechanical pickers and field picker shellers, and the number of acres picked by hand and husked or snapped from the shock. The acreage on which machine work was hired was reported. The quantities dried on the farm with both heated and forced unheated air were reported also. Acreages and methods of harvesting were reported when the corn was grown for silage or for feeding green without removing the ears. The rest of the corn crop was hogged down or grazed. Reports were made on the acreage utilized in this way.

The data were summarized by seven size-of-farm groups within each State. These data were weighted by the 1954 Census of Agriculture number of farms in each group to derive State estimates.

Information on acreage, production, and utilization is from summaries released by the Crop Reporting Board. Results of other studies of harvesting corn for grain and harvesting silage are included and used for comparative analysis. They are from U. S. Department of Agriculture Statistical Bulletin No. 129, Harvesting Corn for Grain; and Statistical Bulletin No. 217, Silage from the 1955 Crops. The study reported is the second one to include harvesting operations for the entire corn crop. The earlier study, U. S. Bureau of Agricultural Economics, F. M. 49, Harvesting the Corn Crop, reported on the 1943 crop.

Estimated numbers of principal machines used in harvesting the corn crop are also included in this report in order to present recent trends in mechanizing the corn harvest.

ACREAGE AND PRODUCTION TRENDS

A general decline since 1930 in the acreage of land used for corn has been accompanied by a steady increase in yield per acre (table 1). The yield increased more rapidly than the acreage decreased, resulting in more total corn in recent years. Today, a 3-billion-bushel corn crop is common, but before 1940, there were only two such crops.

Since 1930, the general trend in corn acreage has been downward in most areas of the country. Increases in the Lake States were due to an increase in acreage for grain, and in the Northeast to a larger acreage of corn for silage.

UTILIZATION OF THE CORN CROP

Although 85 to 89 percent of the total acreage of corn has been harvested for grain, the big change in utilization during the years has been the steady increase in the proportion of the corn acreage used for silage. In the 1919-21 period, 4 percent went into silage, while in the 1952-56 period, 8 percent was so used. The acreage of corn used for hogging or grazing and forage has been declining for about 25 years.

The percentages of the crop utilized for different purposes in 1956 did not vary greatly from the 1952-56 averages in most areas (tables 1 and 2). The percentage going into silage in the Northern Plains and Mountain States continued to increase. The increase in hogging, grazing, or forage in the Southern Plains was due largely to prolonged drought.

Utilization varies greatly in different areas. In the Corn Belt, the Great Plains, and the Southern States, corn is used principally for grain. About one-third of the acreage in the Northeast goes into silage. In the Mountain States, the total acreage planted to corn has declined, but the acreage used for silage has increased remarkably. Table 2 shows average yields and utilization of the 1956 acreage by States.

CORN FOR GRAIN

In 1956, weather was favorable and the corn crop in the eastern and northern areas of the Corn Belt, most Mid-Atlantic States, and the Mountain States was excellent. The western Corn Belt area was plagued again, as in 1955, by severe drought.

Despite the drought, 3,090 million bushels of corn were harvested as corn for grain by farmers in 1956.

Mechanical Harvesting

Each year more of the corn crop is harvested mechanically. Corn-pickers were developed around 1860 but it was not until 1909 that they came into commercial production. Farmers were slow to accept them until around 1928 when tractor power takeoff became available. By 1930, there were 50,000 mechanical pickers on farms. About 725,000 mechanical pickers were available for harvesting the 1956 crop (table 3); of these, a few were field picker shellers. The five Corn Belt States and Minnesota, Nebraska, and South Dakota had about 75 percent of the pickers and the Corn Belt alone had more than half the total.

Field pickers have enabled farmers to harvest an acre of corn in 2.6 hours compared with 6.4 hours when the corn is picked by hand and more than 24 hours when the corn is husked from the shock. 1/

1/ Hecht, R. W., and Vice, K. R. Labor Used for Field Crops. U. S. Dept. Agr. Statis. Bul. 1144. 1954.

The part of the acreage of corn for grain harvested with mechanical pickers increased from 12 percent in 1938 to 78 percent in 1956 (table 4). Farmers in the Corn Belt States harvested 94 percent of the acreage with pickers in 1956. Other areas in which most of the crop is picked mechanically are in the Northern Plains, Lake, and Northeastern States. In the South, mechanical picking developed slowly before 1950 but has made exceptional progress since then. As late as 1943, less than 1 percent of the acreage was picked mechanically. The rapid increase in average yield per acre in recent years is a factor in adoption of pickers. In 1956, no State harvested less than 15 percent with a field picker. Kentucky, Florida, and Texas harvested about half the crop by this method.

A relatively new machine, the field picker sheller, has emerged into the corn-harvesting picture. Although it was introduced in the 1930's, progress in field shelling has been limited because of lack of adequate drying facilities. An additional reason for the slow progress of field shelling is that farmers have a large number of relatively new cornpickers, but as the usefulness of these machines decline, farmers may tend toward the purchasing of picker shellers to replace cornpickers.

Field shelling is done to some extent in all areas of the country (table 5). In the more important production areas, the amount of the crop that was harvested in this way ranged from only 2 to 5 percent. But in the Pacific States, field shelling was the chief method of harvest in 1956. In California, about three-fourths of the crop was shelled in the field.

Three basic types of field picker shellers are used by farmers. These are:

1. The complete picker sheller unit, in which snapping, husking, and shelling are all accomplished by one machine;
2. The corn-snapper attachment or combine head, which permits the grain combine to be used as a corn-harvesting machine;
3. The portable corn-sheller unit, which some farmers trail behind the cornpickers.

In 1956, "Facts for Industry" reports of the Bureau of the Census showed that twice as many picker heads for combines as complete picker sheller machines were shipped for domestic use, and in 1957 the ratio was 3 to 1.

With moderate increases in drying and handling facilities, field-shelling operations have become important to some of the larger farmers and custom operators. The picker sheller permits a farmer to harvest fairly high-moisture corn in one operation, then to dry and store it, or send it directly to the elevator in order to market the crop at the higher early-season price.

Farmers who are considering field shelling should check on research done in their areas concerning the proper moisture content of corn to be field shelled. Severe field losses occur if, at shelling time, the moisture content is either too high or too low. Also, drying costs are higher if corn is shelled when its moisture content is too high.

Custom work is often the most economical way of accomplishing specific jobs that involve certain degrees of mechanization. This can be true on small farms, as well as on larger farms that have diversified enterprises. A New Hampshire study ^{2/} suggests custom hiring the work done if the rates do not exceed both fixed and operating costs involved in owning and operating the required machinery.

Custom operators or equipment hired otherwise by farmers accounted for more than 20 percent of the acreage of corn harvested mechanically for grain (table 6). The range was from 16 percent in the Northern Plains and Corn Belt States to 42 percent in the Pacific States. On very small acreages, around 70 percent was harvested in this way compared with about 10 percent on large acreages. Exchange equipment accounted also for some of the machine harvesting on farms with small acreages of corn for grain.

Hand Harvesting

In 1956, almost 20 percent of the acreage of corn for grain was harvested by hand, mainly from the standing stalk (table 7). In the major corn-producing areas, harvesting by hand was confined largely to those farms on which fewer than 20 acres of corn were harvested (table 8). But in most of the South, hand harvesting was still the predominant method (table 5).

As late as 1943, nearly 60 percent of the acreage of corn for grain in the United States was harvested by hand from the standing stalk. But in 1956, only farmers with less than 10 acres of corn used hand methods to this extent.

In 1913, shocking corn in the field to be husked or snapped later was an important method of harvesting corn for grain (table 7). This involved much hand labor and sometimes caused the harvest to spread over several months. In 1956, only 2 percent of the acreage of corn for grain was cut and shocked. In the Appalachian States, about 10 percent was still handled by this method.

Much of the shocked corn was cut by hand (table 5). Only in the Plains States were corn binders used to cut more than half of the acreage that was cut and shocked.

^{2/} Frick, G. E., and Weeks, S. B. When to Hire and When to Own Farm Equipment on New Hampshire Farms, N. H. Agr. Col. Ext. Bul. 136. 1956.

Drying Corn

Both shelled and ear corn may be artificially dried at the farmstead when the moisture content is too high for safe storage. In recent years, with the development of field shelling, drying shelled corn has gained in importance, but in 1956 only 3 percent of the corn for grain was dried **artificially**. Of this, about 2 percent was dried with heated air and 1 percent with forced unheated air (table 9).

The percentage of the crop that was dried was determined largely by the quantities that were field shelled and by the weather. In the Northeast and the Lake States, where the climate is humid and field shelling was relatively high, the percentage dried was higher than for the rest of the country. Drying on the farm was important here also because much of the corn is used on the farm where it is produced.

The main factors that usually determine whether or not a farmer has installed, or should install, drying facilities are as follows:

1. The size of the corn crop;
2. Location and seasonal changes in weather;
3. The initial investment and operating costs involved in owning drying equipment as compared with alternative methods;
4. The type, size, and age of harvesting equipment.

Studies in Illinois show that the break-even point for handling field-shelled corn in preference to ear corn is about 7,000 to 7,500 bushels. This assumes owning all new equipment for both harvesting and storage operations. It is pointed out also that farmers who need to replace either corn harvesting or storage equipment are in the best position to make the change to shelled-corn methods. 3/

CORN FOR SILAGE

The percentage of the corn acreage used for silage has increased rather steadily for the last third of a century (table 1). Despite a decline in the total acreage of corn in this period, the acreage used for silage increased 82 percent.

In 1956, farmers in the United States harvested more than 54 million tons of corn for silage. To convey some idea of the harvesting job involved, this amount of silage would fill a trench approximately 25 feet wide and 10 feet deep, which would extend from Maine to California.

3/ Davis, Velmar. Trends, Management Problems, and Costs of Field Shelling, Heated Air Drying and Storage of Shelled Corn, Ill. Agr. Expt. Sta. (1957.) (Mimeographed.); Davis, Velmar, VanArsdall, R. N. and Wills, J. E. Management and Costs of Field-Shelling and Artificial Drying of Corn in Illinois, Ill. Agr. Expt. Sta. Bul. 638. 1959.

Field forage harvesters were used to harvest almost 90 percent of this corn (table 10). In 1948, only a third of the corn harvested for silage was harvested by this method. Chopping corn in the field enables the farmer to do the job with about half the labor needed to do the chopping with a stationary cutter at the silo. Time saved, heavy work eliminated, and improved harvesters have all contributed to the rapid rise in mechanical field harvesting. About 240,000 field forage harvesters were available to harvest the 1956 crop (table 3).

Harvesting methods varied to some extent in different sections of the country. The use of cornbinders was still fairly important in the Northeastern, Appalachian, Southeastern, and Lake States. Hand and other methods of cutting the stalks in the field were no longer important, especially in areas where much corn was harvested for silage. Methods of cutting other than by hand were by mowers and grain binders, but the amounts so harvested were small. The use of grain binders probably meant that the corn was small, either because of drought or because of close planting.

HOGGING, GRAZING, AND FORAGE

Corn hogged, grazed, and used for forage accounts for only about 5 percent of the total corn acreage in the United States (table 1). Around 1930, as much as 11 million acres of the corn crop was utilized in this way. These methods of utilization have declined steadily, and now only about a third of this acreage is so harvested.

Of the corn hogged, grazed, and used for forage, almost 20 percent was cut for forage (table 11). In the Northeast, Lake, and Pacific States, more of the corn was cut for forage than was hogged or grazed, while hogging and grazing was more important in other parts of the country.

The forage corn was cut for feeding without removing the ears. In drought areas, however, much of this corn was cut for feeding because little or no grain was produced.

The extent to which the different methods are used in cutting the forage corn is shown in table 11. About half of it was cut with corn binders, and an additional fourth was cut by hand. Cutting by hand was done largely in the South. Corn binders were used extensively in the Northern Plains and the Lake States. Limited use of field forage harvesters, mowers, and grain binders was reported in most areas.

Table 1. - Corn: Acreage harvested, utilization, and yield per harvested acre, by regions, specified periods

Region and period ^{1/}	Acreage harvested	Percentage of acreage -			Yield per harvested acre ^{2/}
		Harvested for grain	Harvested for silage	Hogged, grazed, and for forage	
	<u>1,000 acres</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Bushels</u>
Northeast:					
1919-21-----	3,558	74	18	8	42
1929-31-----	2,837	64	28	8	34
1939-41-----	2,997	65	30	5	37
1949-51-----	2,909	65	33	2	45
1952-56-----	3,045	66	32	2	48
Corn Belt:					
1919-21-----	34,496	89	3	8	37
1929-31-----	34,754	88	3	9	32
1939-41-----	28,269	96	2	2	46
1949-51-----	31,471	96	2	2	49
1952-56-----	32,219	95	3	2	53
Lake States:					
1919-21-----	7,473	68	17	15	36
1929-31-----	7,931	56	23	21	29
1939-41-----	8,230	70	23	7	40
1949-51-----	9,663	73	22	5	42
1952-56-----	10,065	79	19	2	52
Appalachian:					
1919-21-----	11,552	95	1	4	23
1929-31-----	9,933	94	2	4	20
1939-41-----	9,429	97	1	2	24
1949-51-----	7,733	96	2	2	35
1952-56-----	7,001	93	4	3	32
Southeast:					
1919-21-----	10,187	98	<u>3/</u>	2	14
1929-31-----	8,653	97	<u>3/</u>	3	12
1939-41-----	10,081	97	<u>3/</u>	3	11
1949-51-----	7,674	87	<u>3/</u>	13	18
1952-56-----	6,912	83	<u>3/</u>	17	19
Delta States:					
1919-21-----	6,823	97	<u>3/</u>	3	17
1929-31-----	5,289	96	<u>3/</u>	4	15
1939-41-----	6,737	98	<u>3/</u>	2	16
1949-51-----	3,947	97	<u>3/</u>	3	22
1952-56-----	3,000	92	<u>2</u>	6	21
Southern Plains:					
1919-21-----	8,271	97	<u>3/</u>	3	21
1929-31-----	7,871	95	<u>3/</u>	5	15
1939-41-----	6,483	95	1	4	17
1949-51-----	3,578	97	1	2	20
1952-56-----	2,395	89	4	7	18
Northern Plains:					
1919-21-----	16,653	87	1	12	26
1929-31-----	22,423	79	3	18	18
1939-41-----	12,929	77	5	18	18
1949-51-----	14,809	86	4	10	28
1952-56-----	13,659	79	12	9	26
Mountain:					
1919-21-----	1,625	76	4	20	16
1929-31-----	2,174	76	3	21	15
1939-41-----	1,462	65	9	26	14
1949-51-----	1,007	53	18	29	23
1952-56-----	837	38	36	26	38
Pacific:					
1919-21-----	248	58	30	12	31
1929-31-----	180	45	28	27	32
1939-41-----	175	49	32	19	32
1949-51-----	117	46	42	12	39
1952-56-----	217	59	36	5	62
United States:					
1919-21-----	100,886	89	4	7	29
1929-31-----	102,045	85	4	11	23
1939-41-----	86,791	89	5	6	30
1949-51-----	82,908	89	6	5	37
1952-56-----	79,350	87	8	5	41

^{1/} See table 2 for States included in regions.

^{2/} Yield expressed in terms of grain equivalent for all corn.

^{3/} Less than 0.5 percent.

Table 2. - Corn: Acreage harvested, utilization, and yield, by States and regions, 1956

State and region	Acreage harvested	Percentage of acreage -			Yield per harvested acre		
		Harvested for grain	Harvested for silage	Hogged, grazed, and for forage	Total	Grain	Silage
	1,000 acres	Percent	Percent	Percent	Bushels	Bushels	Tons
Northeast:							
New England-----	152	5	92	3	45.0	48.0	9.4
New York-----	696	33	64	3	49.0	53.0	9.8
New Jersey-----	188	75	23	2	64.0	64.0	10.5
Pennsylvania-----	1,281	78	20	2	56.0	56.0	
Delaware-----	150	96	3	1	65.0	65.0	11.0
Maryland-----	477	91	8	1	60.0	60.0	12.0
Total or average-----	2,944	66	32	2	55.4	57.7	9.9
Corn Belt:							
Ohio-----	3,595	95	4	1	60.0	60.0	9.4
Indiana-----	4,734	97	2	1	62.0	62.0	10.5
Illinois-----	8,712	97	2	1	68.0	68.0	11.5
Iowa-----	10,067	93	4	3	53.0	53.5	9.5
Missouri-----	3,946	95	3	2	48.0	48.0	8.5
Total or average-----	31,054	95	3	2	58.8	59.0	9.9
Lake States:							
Michigan-----	2,004	83	14	3	51.0	52.0	8.6
Wisconsin-----	2,740	63	36	1	61.0	65.0	10.1
Minnesota-----	5,734	88	11	1	57.5	58.5	9.8
Total or average-----	10,478	81	18	1	57.2	58.5	9.8
Appalachian:							
Virginia-----	822	89	9	2	48.0	48.0	12.0
West Virginia-----	170	89	10	1	50.0	50.0	11.5
North Carolina-----	1,968	95	3	2	41.0	41.0	9.5
Kentucky-----	1,836	97	2	1	46.0	46.0	10.5
Tennessee-----	1,716	95	2	3	32.5	32.5	8.5
Total or average-----	6,512	95	3	2	38.7	41.3	10.6
Southeast:							
South Carolina-----	975	90	2	8	21.0	21.0	6.5
Georgia-----	2,711	80	1	19	24.0	24.0	6.5
Florida-----	580	63	1	36	21.0	21.0	7.0
Alabama-----	2,267	91	1	8	25.0	25.0	5.5
Total or average-----	6,533	84	1	15	23.6	23.7	6.3
Delta States:							
Mississippi-----	1,566	96	1	3	25.0	25.0	8.0
Arkansas-----	670	96	2	2	27.0	27.0	6.5
Louisiana-----	626	91	1	8	26.5	27.0	8.0
Total or average-----	2,862	95	1	4	25.8	25.9	7.6
Southern Plains:							
Oklahoma-----	321	85	8	7	16.5	17.0	4.5
Texas-----	1,831	87	3	10	15.0	16.5	5.0
Total or average-----	2,152	87	4	9	15.2	16.6	4.8
Northern Plains:							
North Dakota-----	1,328	35	43	22	24.0	26.5	4.4
South Dakota-----	3,784	84	9	7	28.0	29.5	5.0
Nebraska-----	5,312	76	10	14	22.0	23.5	5.0
Kansas-----	1,527	59	30	11	21.0	25.0	3.9
Total or average-----	11,951	72	16	12	24.0	26.0	4.6
Mountain:							
Montana-----	171	4	33	63	17.5	21.5	6.0
Idaho-----	59	25	73	2	66.0	66.0	16.0
Wyoming-----	64	28	41	31	22.0	26.0	7.0
Colorado-----	408	50	42	8	42.5	42.0	10.5
New Mexico-----	58	50	21	29	23.0	22.5	11.0
Arizona-----	45	78	18	4	33.0	30.0	11.5
Utah-----	44	9	84	7	58.0	54.0	13.5
Nevada-----	4	25	75	—	50.0	50.0	13.0
Total or average-----	853	37	42	21	36.6	38.9	10.6
Pacific:							
Washington-----	39	54	44	2	72.0	73.0	13.5
Oregon-----	40	43	45	12	60.0	65.0	13.0
California-----	216	65	34	1	72.0	74.0	14.0
Total or average-----	295	60	37	3	70.4	73.0	13.8
United States-----	75,634	86	9	5	45.7	47.3	8.3

Table 3. - Corn harvesting machines: Number on farms, by States and regions, January 1, 1952 and 1957

State and region	Cornpickers and picker shellers 1957				Field forage harvesters	
	Cornpickers 1952				1952	1957
		Total	1-row	2-row		
	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands
Northeast:						
New England-----	1/	1/	---	---	3	5
New York-----	3	5	---	---	8	14
New Jersey-----	2	2	---	---	1	2
Pennsylvania-----	12	18	---	---	5	10
Delaware-----	1	2	---	---	---	---
Maryland-----	4	6	---	---	1	2
Total-----	22	33	25	8	18	33
Corn Belt:						
Ohio-----	45	56	---	---	5	9
Indiana-----	58	66	---	---	4	6
Illinois-----	92	102	---	---	9	14
Iowa-----	111	124	---	---	12	16
Missouri-----	26	39	---	---	3	9
Total-----	332	387	166	221	33	54
Lake States:						
Michigan-----	14	25	---	---	6	10
Wisconsin-----	13	25	---	---	18	33
Minnesota-----	57	67	---	---	11	19
Total-----	84	117	71	46	35	62
Appalachian:						
Virginia-----	4	7	---	---	1	3
West Virginia-----	1	1	---	---	1	1
North Carolina-----	3	8	---	---	---	2
Kentucky-----	7	12	---	---	1	2
Tennessee-----	3	5	---	---	1	3
Total-----	18	33	26	7	4	11
Southeast:						
South Carolina-----	1	1	---	---	---	1
Georgia-----	1	6	---	---	1	2
Florida-----	1/	1	---	---	---	---
Alabama-----	1	4	---	---	---	1
Total-----	3	12	9	3	1	4
Delta States:						
Mississippi-----	1	2	---	---	---	2
Arkansas-----	1	2	---	---	1	1
Louisiana-----	1	1	---	---	---	1
Total-----	3	5	4	1	1	4
Southern Plains:						
Oklahoma-----	2	2	---	---	1	4
Texas-----	5	8	---	---	1	6
Total-----	7	10	7	3	2	10
Northern Plains:						
North Dakota-----	8	6	---	---	3	8
South Dakota-----	36	35	---	---	3	7
Nebraska-----	54	61	---	---	4	9
Kansas-----	16	21	---	---	7	15
Total-----	114	123	59	64	17	39
Mountain States-----	4	4	3	1	8	14
Pacific States-----	1	1	1	1/	5	9
United States-----	588	725	371	354	124	240

1/ Less than 500.

Table 4. - Corn for grain: Acreage harvested and percentage harvested with cornpickers, by States and regions, specified years

State and region	Acreage harvested					Percentage harvested with cornpicker				
	1938	1943	1946	1951	1956	1938	1943	1946	1951	1956
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	Percent	Percent	Percent	Percent	Percent
Northeast:										
New England-----	38	28	25	20	8	---	3	13	65	68
New York-----	198	131	153	172	231	1	13	25	75	79
New Jersey-----	144	127	125	135	142	2	12	20	70	77
Pennsylvania-----	1,080	1,024	1,055	1,053	1,002	3	10	29	75	81
Delaware-----	139	130	134	151	144	1/	4	22	70	78
Maryland-----	463	413	412	406	437	1/	5	20	70	80
Total or average----	2,062	1,853	1,904	1,937	1,964	2	9	26	73	80
Corn Belt:										
Ohio-----	3,350	3,186	3,405	3,334	3,415	12	34	55	87	90
Indiana-----	4,003	4,114	4,398	4,396	4,592	22	54	65	93	96
Illinois-----	8,073	8,023	8,553	8,684	8,477	43	65	75	93	96
Iowa-----	9,844	10,127	10,600	9,907	9,413	35	63	76	95	98
Missouri-----	4,142	4,172	4,239	3,689	3,749	2	7	18	60	78
Total or average----	29,412	29,622	31,195	30,010	29,646	28	51	64	89	94
Lake States:										
Michigan-----	1,240	1,043	1,243	1,365	1,671	5	23	37	80	88
Wisconsin-----	1,164	1,302	1,299	1,278	1,714	5	21	37	80	88
Minnesota-----	3,360	4,102	4,323	4,410	5,035	35	65	76	95	93
Total or average----	5,764	6,447	6,865	7,053	8,420	22	49	61	89	91
Appalachian:										
Virginia-----	1,287	1,225	1,017	886	734	1/	1	10	44	48
West Virginia-----	412	347	284	202	151	1/	1/	2	20	39
North Carolina-----	2,388	2,252	2,104	2,107	1,866	1/	1	4	15	40
Kentucky-----	2,484	2,457	2,194	2,104	1,782	2	1	8	41	57
Tennessee-----	2,628	2,508	2,106	1,899	1,630	---	1	3	16	24
Total or average----	9,199	8,789	7,705	7,198	6,163	---	1	6	27	42
Southeast:										
South Carolina-----	1,818	1,553	1,415	1,263	878	1/	1/	2	6	21
Georgia-----	4,504	3,511	2,886	2,554	2,164	1/	1/	1	7	36
Florida-----	694	595	526	379	364	---	1/	2	4	51
Alabama-----	3,564	3,128	2,531	2,247	2,074	---	1/	1	7	31
Total or average----	10,580	8,787	7,358	6,443	5,480	1/	1/	1	7	33
Delta States:										
Mississippi-----	3,162	2,626	2,173	1,694	1,506	1/	1/	1	10	20
Arkansas-----	2,228	1,670	1,435	955	646	---	1/	1	11	18
Louisiana-----	1,673	1,242	975	677	570	1/	1/	1	4	15
Total or average----	7,063	5,538	4,583	3,326	2,722	1/	1/	1	9	18
Southern Plains:										
Oklahoma-----	1,652	1,573	1,317	946	273	---	2	6	33	37
Texas-----	4,725	4,572	3,019	2,176	1,593	---	1	6	27	50
Total or average----	6,377	6,145	4,336	3,122	1,866	---	1	6	29	48
Northern Plains:										
North Dakota-----	307	419	437	405	465	5	61	72	91	94
South Dakota-----	2,231	2,799	3,529	2,880	3,178	18	44	72	95	94
Nebraska-----	6,613	7,499	7,418	6,726	4,037	4	21	45	90	93
Kansas-----	1,944	2,987	2,469	2,187	901	1	12	24	73	78
Total or average----	11,095	13,704	13,853	12,198	8,581	6	25	49	88	92
Mountain:										
Colorado-----	777	676	372	370	204	4	12	28	70	76
Other-----	367	275	188	120	108	1	7	12	22	45
Total or average----	1,144	951	560	490	312	3	10	23	58	65
Pacific States:										
-----	92	70	51	49	179	---	13	30	60	28
United States-----	82,788	81,906	78,410	71,826	65,333	12	27	41	68	78

1/ Less than 0.5 percent.

Table 5. - Corn for grain: Methods of harvesting, by States and regions, 1956

State and region	Acreage harvested	Percentage harvested -					
		From standing stalk by -			Husked or snapped from shock		
		Mechanical picker	Picker sheller	Hand	Total	Method of cutting -	
						Corn binder	All other - mostly hand
	1,000 acres	Percent	Percent	Percent	Percent	Percent	Percent
Northeast:							
New England-----	8	68	---	24	8	---	---
New York-----	231	79	8	8	5	---	---
New Jersey-----	142	77	5	12	6	---	---
Pennsylvania-----	1,002	81	3	10	6	---	---
Delaware-----	144	78	10	8	4	---	---
Maryland-----	437	80	5	8	7	---	---
Total or average-----	1,964	80	5	9	6	2	4
Corn Belt:							
Ohio-----	3,415	90	3	3	4	---	---
Indiana-----	4,592	96	1	2	1	---	---
Illinois-----	8,477	96	2	2	1/	---	---
Iowa-----	9,413	98	1	1	1/	---	---
Missouri-----	3,749	78	3	16	3	---	---
Total or average-----	29,646	94	2	3	1	1/	1/
Lake States:							
Michigan-----	1,671	88	3	4	5	---	---
Wisconsin-----	1,714	88	2	5	5	---	---
Minnesota-----	5,035	93	4	2	1	---	---
Total or average-----	8,420	91	3	3	3	3	1/
Appalachian:							
Virginia-----	734	48	2	28	22	---	---
West Virginia-----	151	39	1	20	40	---	---
North Carolina-----	1,866	40	5	50	5	---	---
Kentucky-----	1,782	57	1	32	10	---	---
Tennessee-----	1,630	24	1	67	8	---	---
Total or average-----	6,163	42	2	46	10	2	8
Southeast:							
South Carolina-----	878	21	2	75	2	---	---
Georgia-----	2,164	36	3	60	1	---	---
Florida-----	364	51	2	45	2	---	---
Alabama-----	2,074	31	2	65	2	---	---
Total or average-----	5,480	33	2	63	2	1/	2
Delta States:							
Mississippi-----	1,506	20	3	75	2	---	---
Arkansas-----	646	18	5	74	3	---	---
Louisiana-----	570	15	2	80	3	---	---
Total or average-----	2,722	19	3	76	2	1/	2
Southern Plains:							
Oklahoma-----	273	37	2	60	1	---	---
Texas-----	1,593	50	4	45	1	---	---
Total or average-----	1,866	48	4	47	1	1	1/
Northern Plains:							
North Dakota-----	465	94	3	1	2	---	---
South Dakota-----	3,178	94	4	2	1/	---	---
Nebraska-----	4,037	93	1	5	1	---	---
Kansas-----	901	78	5	15	2	---	---
Total or average-----	8,581	92	2	5	1	1	1/
Mountain:							
Colorado-----	204	76	3	17	4	---	---
Other-----	108	45	22	29	4	---	---
Total or average-----	312	65	10	21	4	2	2
Pacific States-----	179	27	63	10	1/	1/	1/
United States-----	65,333	78	3	17	2	1	1

1/ Less than 0.5 percent.

Table 6.- Corn for grain: Percentage of acreage mechanically harvested with hired machines, by specified acreage and regions, 1956

Region	Percentage harvested on farms with corn acreage of -						All farms
	Less than 10 acres	10 to 19 acres	20 to 34 acres	35 to 54 acres	55 to 99 acres	100 acres and over	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Northeast-----	78	50	30	18	12	1	36
Corn Belt-----	72	45	33	17	10	4	16
Lake States-----	78	60	35	20	12	5	26
Appalachian-----	55	48	30	25	12	5	28
Southeast-----	75	65	45	40	25	14	36
Delta States-----	50	45	36	26	23	15	30
Southern Plains-----	70	65	55	40	20	15	35
Northern Plains-----	58	42	28	25	13	6	16
Mountain-----	75	65	40	20	15	5	29
Pacific-----	85	75	66	60	45	30	42
United States-----	71	52	36	24	13	9	21

Table 7. - Corn for grain: Percentage of acreage harvested, by designated methods, by States and regions, specified years

State and region	From standing stalk by hand				Cut and shocked, husked or snapped			
	1913 ^{1/}	1943	1951	1956	1913	1943	1951	1956
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Northeast:								
New England-----	2/	28	20	24	2/	69	15	8
New York-----	2/	28	11	8	2/	59	14	5
New Jersey-----	2/	42	20	12	2/	46	10	6
Pennsylvania-----	2	31	13	10	98	59	12	6
Delaware-----	2/	19	10	8	2/	77	20	4
Maryland-----	2/	12	11	8	2/	83	19	7
Total or average-----	9	26	13	9	91	65	14	6
Corn Belt:								
Ohio-----	9	19	5	3	91	47	8	4
Indiana-----	39	35	5	2	61	11	2	1
Illinois-----	59	30	6	2	41	5	1	2/
Iowa-----	80	35	4	1	20	2	1	3/
Missouri-----	42	71	35	16	58	22	5	3
Total or average-----	53	37	9	4	47	12	2	1
Lake States:								
Michigan-----	2	22	7	4	98	55	13	5
Wisconsin-----	9	24	9	5	91	55	11	5
Minnesota-----	43	23	3	2	57	12	2	1
Total or average-----	24	23	5	3	76	28	6	3
Appalachian:								
Virginia-----	18	20	26	28	82	79	30	22
West Virginia-----	5	10	28	20	95	89	52	40
North Carolina-----	84	81	76	50	16	19	9	5
Kentucky-----	30	37	45	32	70	62	14	10
Tennessee-----	73	74	74	67	27	25	10	8
Total or average-----	52	56	59	46	48	44	14	10
Southeast:								
South Carolina-----	93	97	92	75	7	3	2	2
Georgia-----	95	97	91	60	5	3	2	1
Florida-----	96	95	94	45	4	5	2	2
Alabama-----	94	98	91	65	6	2	2	2
Total or average-----	94	97	91	63	6	3	2	2
Delta States:								
Mississippi-----	98	93	88	75	2	7	2	2
Arkansas-----	90	94	84	74	10	6	5	3
Louisiana-----	98	95	93	80	2	5	3	3
Total or average-----	95	94	88	76	5	6	3	2
Southern Plains:								
Oklahoma-----	76	89	63	60	24	9	4	1
Texas-----	90	98	71	45	10	1	2	1
Total or average-----	84	96	69	47	16	3	3	1
Northern Plains:								
North Dakota-----	25	27	3	1	75	12	6	2
South Dakota-----	51	53	4	2	49	3	1	3/
Nebraska-----	58	78	9	5	42	1	1	1
Kansas-----	54	81	24	15	46	7	3	2
Total or average-----	55	72	10	5	45	3	2	1
Mountain:								
Colorado-----	67	77	26	17	33	11	4	4
Other States-----	50	81	72	29	50	12	6	4
Total or average-----	61	78	37	21	39	11	4	4
Pacific States:								
United States-----	54	77	35	10	46	10	5	2/
United States-----	61	59	28	17	39	14	4	2

^{1/} Includes acreage harvested with cornpickers. Only 1,000 cornpickers were estimated on U. S. farms in 1910, so that probably less than 0.1 percent of the 1913 corn acreage was harvested with pickers.

^{2/} Included in State group total.

^{3/} Less than 0.5 percent.

Table 8. - Corn for grain: Method of harvesting on farms, by specified acreage of corn and regions, 1956

Region and method	Percentage harvested on farms with corn acreage of -						All farms
	Less than 10 acres	10 to 19 acres	20 to 34 acres	35 to 54 acres	55 to 99 acres	100 acres and over	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Northeast:							
Cornpicker-----	59	80	87	92	88	55	80
Picker sheller-----	1	2	3	4	10	45	5
Hand picked-----	24	10	7	3	1	1/	9
Shocked-----	16	8	3	1	1	1/	6
Corn Belt:							
Cornpicker-----	55	80	90	96	98	97	93
Picker sheller-----	1/	1	1	2	2	3	2
Hand picked-----	30	15	7	2	1/	1/	4
Shocked-----	15	4	2	1/	1/	1/	1
Lake States:							
Cornpicker-----	68	85	94	96	96	86	91
Picker sheller-----	2	2	2	3	4	14	3
Hand picked-----	16	7	2	1/	1/	1/	3
Shocked-----	14	6	2	1	1/	1/	3
Appalachian:							
Cornpicker-----	14	32	44	61	68	79	42
Picker sheller-----	1/	1	3	5	5	7	2
Hand picked-----	63	57	47	31	26	14	46
Shocked-----	23	10	6	3	1	1/	10
Southeast:							
Cornpicker-----	9	16	27	45	59	60	33
Picker sheller-----	1/	1	1	5	3	10	2
Hand picked-----	88	80	69	50	38	30	63
Shocked-----	3	3	3	1/	1/	1/	2
Delta States:							
Cornpicker-----	3	13	17	17	35	35	19
Picker sheller-----	1/	2	2	4	15	18	3
Hand picked-----	89	84	80	78	50	47	76
Shocked-----	8	1	1	1	1/	1/	2
Southern Plains:							
Cornpicker-----	16	16	28	37	65	70	84
Picker sheller-----	1/	1/	1	3	3	10	10
Hand picked-----	80	80	69	59	32	20	6
Shocked-----	4	4	2	1	1/	1/	1/
Northern Plains:							
Cornpicker-----	42	71	87	90	94	93	91
Picker sheller-----	3	3	3	4	4	5	4
Hand picked-----	49	23	9	5	2	2	5
Shocked-----	6	3	1	1	1/	1/	1/
West:							
Cornpicker-----	46	58	65	66	56	29	52
Picker sheller-----	3	10	14	17	30	68	29
Hand picked-----	40	29	20	17	14	3	17
Shocked-----	11	3	1	1/	1/	1/	2
United States:							
Cornpicker-----	25	48	67	83	90	86	78
Picker sheller-----	1	2	2	3	4	8	3
Hand picked-----	60	45	29	13	6	6	17
Shocked-----	14	5	2	1	1/	1/	2

1/ Less than 0.5 percent.

Table 9. - Corn for grain: Production and percentage dried on farms, by regions, 1956

Region	Harvested	Percentage dried -	
		With heated air	With forced unheated air
	1,000 bushels	Percent	Percent
Northeast-----	113,405	5	2
Corn Belt-----	1,749,588	1	1
Lake States-----	492,850	4	2
Appalachian-----	254,235	1	1
Southeast-----	129,868	1	1
Delta States-----	70,482	1	1
Southern Plains-----	30,925	---	1
Northern Plains-----	223,468	1	1
Mountain and Pacific-----	25,195	2	2
United States-----	3,090,016	2	1

Table 10. - Corn for silage: Production and percentage harvested with field forage harvesters, and field harvested by other methods, by States and regions, specified years

State and region	Production		Percentage harvested with field forage harvester				Percentage harvested in 1956 with -	
	Average of 1948, 1951, and 1955	1956	1948	1951	1955	1956	Corn binder	Hand and other methods
	1,000 tons	1,000 tons	Percent	Percent	Percent	Percent	Percent	Percent
Northeast:								
New England-----	1,432	1,307	20	40	76	76	20	4
New York-----	4,450	4,341	20	50	76	78	20	2
New Jersey-----	451	452	36	55	90	90	8	2
Pennsylvania-----	2,524	2,600	21	44	70	72	25	3
Delaware-----	53	55	30	50	85	85	11	4
Maryland-----	443	444	30	50	85	86	10	4
Total or average-----	9,353	9,199	22	47	75	77	20	3
Corn Belt:								
Ohio-----	1,260	1,222	40	60	80	88	10	2
Indiana-----	816	1,092	55	75	88	92	6	2
Illinois-----	1,733	2,104	55	78	94	95	4	1
Iowa-----	2,147	3,534	56	80	94	95	3	2
Missouri-----	702	1,003	25	70	90	92	6	2
Total or average-----	6,658	8,955	50	74	91	93	5	2
Lake States:								
Michigan-----	2,155	2,434	24	60	85	89	9	2
Wisconsin-----	9,647	9,989	30	50	80	87	13	1/
Minnesota-----	5,916	6,292	30	60	82	86	14	1/
Total or average-----	17,718	18,715	29	55	81	87	13	1/
Appalachian:								
Virginia-----	775	912	18	40	70	78	17	5
West Virginia-----	141	196	12	20	60	70	25	5
North Carolina-----	287	504	4	15	60	70	18	12
Kentucky-----	303	441	20	35	70	80	10	10
Tennessee-----	192	264	10	30	70	75	20	5
Total or average-----	1,698	2,317	15	33	67	75	17	8
Southeast:								
South Carolina-----	72	130	---	---	---	80	15	5
Georgia-----	94	104	---	---	---	85	13	2
Florida-----	33	56	---	---	---	85	10	5
Alabama-----	54	88	---	---	---	80	10	10
Total or average-----	253	378	4	30	73	82	12	6
Delta States:								
Mississippi-----	86	176	---	---	---	90	6	4
Arkansas-----	37	72	---	---	---	75	14	11
Louisiana-----	38	48	---	---	---	85	8	7
Total or average-----	161	296	5	40	84	86	8	6
Southern Plains:								
Oklahoma-----	74	117	30	80	90	95	3	2
Texas-----	129	265	30	80	95	96	1	3
Total or average-----	203	382	30	80	93	95	2	3
Northern Plains:								
North Dakota-----	1,228	2,512	60	80	95	96	4	1/
South Dakota-----	1,027	1,705	45	80	93	95	4	1
Nebraska-----	1,232	2,790	65	80	96	96	4	1/
Kansas-----	745	1,786	40	70	92	92	8	1/
Total or average-----	4,232	8,793	55	78	94	95	5	1/
Mountain:								
Montana-----	145	342	---	---	---	96	3	1
Idaho-----	285	688	---	---	---	95	3	2
Wyoming-----	143	182	---	---	---	91	8	1
Colorado-----	1,079	1,796	---	---	---	96	3	1
New Mexico-----	45	132	---	---	---	95	2	3
Arizona-----	50	92	---	---	---	96	2	2
Utah-----	302	500	---	---	---	94	3	3
Nevada-----	31	39	---	---	---	95	2	3
Total or average-----	2,080	3,771	70	89	94	96	3	1
Pacific:								
Washington-----	147	230	40	50	93	92	4	4
Oregon-----	135	234	50	60	85	90	5	5
California-----	550	1,022	62	70	95	97	3	1/
Total or average-----	832	1,486	55	64	93	95	4	1
United States-----	43,188	54,292	32	58	84	89	10	1

1/ Less than 0.5 percent.

Table 11. - Corn hogged, grazed, and for forage: Total acreage, percentage used for forage, and the percentage of forage cut by specified methods, by regions, 1956

Region	Acreage: hogged, grazed, and for forage	Percent- age used for forage	Percentage of forage acreage cut with -				
			Corn binder	Field forage har- vester	Mower	Grain binder	Hand methods
	1,000 acres	Percent	Percent	Percent	Percent	Percent	Percent
Northeast-----	53	75	46	16	---	---	38
Corn Belt-----	501	15	44	30	4	2	20
Lake States-----	144	62	57	22	1	2	18
Appalachian-----	130	15	15	1	---	---	84
Southeast-----	993	1	36	---	---	1	63
Delta States-----	101	12	6	9	---	---	85
Southern Plains--	207	49	32	---	3	---	65
Northern Plains--	1,442	22	68	7	14	5	6
Mountain-----	184	26	32	6	20	13	29
Pacific-----	8	60	21	64	---	---	15
United States--	3,763	19	52	11	8	4	25